

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-29 (cancelled)

30. (Currently Amended) Apparatus for connecting a fitting to a conduit section comprising:

a rigid insert having a generally cylindrical body with a proximal end and a distal end and defining a central lumen, said central lumen extending between said proximal and distal ends, said proximal end being adapted to be received in the conduit section while said distal end projects from the conduit; and

a rigid, one piece retainer, said retainer being generally ring shaped and collar having an opening sufficiently large to receive the insert, the one-piece collar said retainer having a sidewall defining a first end facing the distal end of the insert, a second end facing the proximal end of the insert, and an inner surface defining an opening extending from the first end to the second end, said sidewall having a varying thickness such that a diameter of the opening flaring is generally constant from said second end to a position intermediate said first and second ends and then gradually increases from the a-position intermediate the first and second ends toward the first

end.

31. (Currently Amended) The apparatus of claim 30 wherein the insert body defines a circumferential ~~includes a generally cylindrical body and an annular groove.~~

32. (Currently Amended) The apparatus of claim 30, further comprising ~~wherein the insert includes a generally cylindrical body and an annular groove; and the apparatus includes an annular seal~~ received seated in the circumferential annular ~~groove.~~

33. (Currently Amended) The apparatus of claim 30 wherein ~~one~~ the proximal end of the insert is chamfered.

34. (Currently Amended) The apparatus of claim 30 wherein the insert and ~~the one-piece collar~~ retainer ~~are composed of~~ formed from a common ~~the same~~ material.

35. (Currently Amended) Apparatus for connecting a fitting to a conduit section comprising:

a rigid insert defining a central lumen; and

a rigid, one piece collar having an opening sufficiently large to receive the insert,
the one-piece collar defining a first end, a second end and an opening extending from
the first end to the second end, the opening flaring from a position intermediate the first

and second ends toward the first end. ~~The apparatus of claim 30 including a strap,~~
wherein the insert includes a staple for receiving the strap.

36. (Currently Amended) A The apparatus of claim 33, wherein the rigid insert
is adapted to connect ~~for connecting a fitting to a conduit section, an outer surface of~~
the rigid insert body comprising: ~~comprising a body defining a central lumen;~~ a first
raised detent; a second raised detent axially spaced from the first raised detent; and a
third raised detent between the first and second raised detents, the third raised detent
being smaller than the first and second raised detents.

37. (Currently Amended) The apparatus of claim 36, wherein the insert body
is generally cylindrical in shape and wherein ~~rigid insert of claim 36 wherein the insert~~
~~includes a generally cylindrical body; and the first, second and third raised detents are~~
annular, raised detents.

38. (Currently Amended) The apparatus of claim 37, wherein ~~rigid insert of~~
~~claim 36 wherein the insert includes a generally cylindrical body; and the first, second~~
~~and third raised~~ the detents are annular barbs.

39. (Currently Amended) The apparatus of claim 36, wherein the first and
second ~~rigid insert of claim 36 wherein the first and second raised detents are~~
substantially identical to one another ~~the same in size and configuration.~~

40. (Currently Amended) The apparatus of claim 36, wherein the insert further comprises rigid insert of claim 36 including a fourth raised detent disposed between the first and second raised detents, wherein the third and fourth raised detents are substantially identical to one another being substantially the same in size and configuration.

41. (Currently Amended) The apparatus of claim 36, wherein the insert further comprises rigid insert of claim 36 including a fourth raised detent and a fifth raised detent; the fifth raised detent being axially spaced from the first and second raised detents; the fourth raised detent being between the fifth raised detent and one of the first and second raised detents; and wherein the fourth raised detent being is smaller than the each of the first, second and fifth raised detents.

42. (Currently Amended) The rigid insert of claim 36 including apparatus of claim 36, wherein the insert further comprises a fourth raised detent and a fifth raised detent; the fifth raised detent being axially spaced from the first and second raised detents; the fourth raised detent being between the fifth raised detent and one of the first and second raised detents; the first, second and fifth raised detents being substantially identical to one another the same in size and configuration; and the fourth raised detent being smaller than each of the first, second and fifth raised detents.

43. (Currently Amended) The apparatus of claim 36, wherein the insert further comprises rigid insert of claim 36 including a fourth raised detent and a fifth raised

detent; the fifth raised detent being axially spaced from the first and second raised detents; the fourth raised detent being between the fifth raised detent and one of the first and second raised detents; and wherein the third and fourth raised detents being are substantially identical to one another~~the same in size and configuration.~~

Claims 44-50 (Canceled)

51. (Currently Amended) A coupling apparatus adapted to fluidly couple a first conduit section to a second conduit section, said first conduit section defining a first conduit section lumen and said second conduit section defining a second conduit section lumen, the coupling apparatus ~~Apparatus~~ comprising:

~~a conduit section defining a conduit section lumen;~~

a male fitting comprising a first rigid insert and a shell, said first rigid insert having a cylindrical body with a proximal end and a distal end and defining a central lumen, said shell having a proximal end and a distal end, wherein the shell proximal end is affixed to the distal end of said first rigid insert so as to extend integrally therefrom, said first rigid insert being adapted to extend into said first conduit section lumen such that said shell projects from said first conduit section;

a female fitting comprising a second rigid insert and a socket, said second rigid insert having a cylindrical body with a proximal end and a distal end and defining a central lumen, said socket having a proximal end and a distal end, said socket proximal end being affixed to the second rigid insert distal end so as to extend integrally therefrom, said second rigid insert being adapted to extend into said second conduit

section lumen such that said socket projects from said first conduit section, said socket being disposed around an exterior surface of said shell so as to receive said shell therein; and,

~~a rigid insert defining a central lumen and two axially spaced, raised detents, the rigid insert being affixed to the fitting and extending into the conduit section lumen; and~~

a clamping member disposed around said shell and engaging said socket and serving to sealingly and clampingly secure the male fitting to the female fitting and thereby fluidly couple the first conduit section to the second conduit section~~a rigid, one-piece collar positioned over the conduit section in substantial alignment between the two axially spaced, raised detents.~~

52. (Currently Amended) The coupling apparatus of claim 51 further comprising first and second retainers, said first retainer being disposed around said first conduit section such that a portion of said first conduit section is clampingly received between said first rigid insert and said first retainer, said second collar member being disposed around said second conduit section such that a portion of said second conduit section is clampingly received between said second rigid insert and said second retainer~~wherein the one piece collar straddles at least one of the two axially spaced, raised detents.~~

53. (Currently Amended) The coupling apparatus of claim 51 wherein each body of the first and second inserts~~insert includes a generally cylindrical body and the two axially spaced, raised detents~~includes first and second axially spaced apart

annular, raised detents.

54. (Currently Amended) The coupling apparatus of claim ~~51-53~~, wherein the ~~insert includes a generally cylindrical body and two~~ first and second axially-spaced, annular raised detents are annular barbs.

55. (Currently Amended) The coupling apparatus of claim ~~51-54~~ wherein the annular barbs are substantially identical to one another~~two axially-spaced, raised detents are substantially the same in size and configuration.~~

56. (Currently Amended) The coupling apparatus of claim ~~51-54~~, wherein each body of the first and second inserts further includes ~~including a smaller~~ third raised detent between the first and second ~~two axially-spaced, raised detents, the smaller~~ third raised detent being smaller than the ~~two axially-spaced, raised~~ first and second detents.

57. (Currently Amended) The coupling apparatus of claim ~~51-54~~, wherein each body of the first and second inserts further includes ~~including a~~ third and fourth raised detents ~~third raised detent and a fourth raised detent; the third raised detent being axially spaced from the~~ first and second ~~two axially-spaced, raised detents; the fourth raised detent being between the third raised detent and one of the~~ first and second ~~two axially-spaced, [[.]] raised detents; and the fourth raised detent being smaller than~~ any of the first, second and third detents~~the two axially-spaced, raised~~

~~detents and the third raised detent.~~

58. (Currently Amended) The coupling apparatus of claim 5154, wherein each body of the first and second inserts further includes third and fourth raised detents ~~including a third raised detent and a fourth raised detent~~; the third raised detent being axially spaced from the ~~two axially spaced, raised~~ first and second detents; the fourth raised detent being between the third raised detent and one of the ~~two axially spaced, raised~~ first and second detents; the first, second, and third ~~two axially spaced, raised~~ detents ~~and the third raised detent being~~ are substantially the same in size and configuration identical to one another; and the fourth raised detent ~~being~~ is smaller than any of the first, second, and third detents ~~the two axially spaced, raised detents and the third raised detent.~~

59. (Currently Amended) The coupling apparatus of claim 5154, wherein each of the inserts defines a circumferential groove disposed between the first and second detents, and wherein a seal is disposed in said circumferential groove ~~including an seal mounted on the insert between the two axially spaced, raised detents.~~

60. (Canceled)

61. (Currently Amended) The coupling apparatus of claim 51 wherein the socket one piece collar defines a first end, a second end and an opening extending from the first end to the second end; the opening flares from a position intermediate the

proximal and distal ends and thereby defines an annular, inwardly facing groove that receives a seal. first and second ends toward the first end; and the first end faces the fitting.

62. (Canceled)

63. (Currently Amended) The coupling apparatus of claim 51, further comprising first and second straps including a strap defining strap end portions, wherein the first insert includes insert includes a first staple and the second insert includes a second staple; and wherein the first strap passes through the first staple and is received between the first collar and the first conduit section and the second strap passes through the second staple and is received between the second collar and the second conduit section; and one of the strap end portions engages the one piece collar.

64. (Currently Amended) Apparatus A fitting in combination with a conduit, comprising:

a conduit section defining a conduit section lumen;

a fitting, comprising;

a rigid insert defining a central lumen, the rigid insert ~~being affixed to the fitting and~~ extending into the conduit section lumen;

a coupling portion affixed to the insert and projecting from said conduit section lumen, said coupling portion being adapted to receive a mating coupling portion extending from an associated conduit section; and

a rigid, one piece retainer, said retainer being generally ring shaped and collar
having an opening sufficiently large to receive the insert, ~~the one-piece collar~~said
retainer having a sidewall defining a first end facing the distal end of the insert, a
second end facing the proximal end of the insert, and an inner surface defining an
opening extending from the first end to the second end, said sidewall having a varying
thickness such that a diameter of the opening flaring is generally constant from said
second to a position intermediate said first and second ends and then gradually
increases from the a-position intermediate the first and second ends toward the first
end.

65. (Currently Amended) The combination apparatus of claim 64, further
comprising a seal disposed between the insert and the conduit section including an seal
~~mounted on the insert.~~

66. (Currently Amended) The apparatus combination of claim 64, wherein the
rigid insert has a generally cylindrical body, said body defining a circumferential
~~including an annular seal, wherein the insert including a generally cylindrical body and~~
~~an annular groove disposed between the two axially-spaced, raised detents, and~~
wherein an ; and the annular seal is received seated in the annular circumferential
groove.

67. (Currently Amended) The apparatus combination of claim 64-66, wherein
the retainer is aligned with the seal and cooperates with the insert so as to urge the seal

~~into sealing engagement with the conduit section including an seal mounted on the insert, the one piece collar being in substantial alignment over the seal.~~

68. (Currently Amended) Apparatus comprising:
a conduit section defining a conduit section lumen;
a fitting;
a rigid insert defining a central lumen, the rigid insert being affixed to the fitting
and extending into the conduit section lumen;
a rigid, one-piece retainer positioned over the conduit section, the one-piece
retainer defining a first end, a second end and an opening extending from the first end
to the second end, wherein the opening flares from a position intermediate the first and
second ends toward the first end, and the first end faces the fitting; and,
~~apparatus of claim 64 including a strap defining strap end portions, wherein the insert~~
~~includes a staple₁; the strap passes through the staple₁; and one of the strap end~~
~~portions engages the one-piece collar.~~

69. (Currently Amended) Apparatus comprising:
a conduit section defining a conduit section lumen;
a fitting;
a rigid insert defining a central lumen, a first raised detent, a second raised
detent axially spaced from the first raised detent and a third raised detent axially
spaced from the first and second raised detents, the rigid insert being affixed to the
fitting and extending into the conduit section lumen;

a first retainer positioned over the conduit section, said first retainer being a rigid, one piece annular member and being placed in substantial alignment between the first and second raised detents; and

a second retainer positioned over the conduit section, said second retainer being a rigid, one piece annular member and being in substantial alignment between the second and third raised detents.

70. (original) The apparatus of claim 69 wherein the first retainer straddles at least one of the first and second raised detents.

71. (Canceled)

72. (Currently Amended) Apparatus comprising:
a conduit section defining a conduit section lumen;
a fitting;
a rigid insert defining a central lumen, a first raised detent, a second raised detent axially spaced from the first raised detent and a third raised detent axially spaced from the first and second raised detents, the rigid insert being affixed to the fitting and extending into the conduit section lumen;
a first retainer positioned over the conduit section in substantial alignment between the first and second raised detents; and
a second retainer positioned over the conduit section in substantial alignment between the second and third raised detents;

~~The apparatus of claim 69 wherein the first retainer is a rigid, one-piece collar,~~
~~the one-piece collar defining~~wherein the first retainer has a first end, a second end and
an opening extending from the first end to the second end, the opening flaring from a
position intermediate the first and second ends toward the first end; and the first end of
the first retainer faces the fitting.

73. (Canceled)

74. (Currently Amended) The apparatus of claim ~~69~~72 wherein the insert
includes a generally cylindrical body; and the first and second raised detents are
annular, raised detents.

75. (Currently Amended) The apparatus of claim ~~69~~72 wherein the insert
includes a generally cylindrical body; and the first and second raised detents are
annular barbs.

76. (Currently Amended) The apparatus of claim ~~69~~72 including a seal
mounted on the insert between the first and second raised detents.

77. (Currently Amended) The apparatus of claim ~~69~~72 including an annular
seal, wherein the insert includes a generally cylindrical body and an annular groove
between the first and second raised detents; and the annular seal is seated in the
annular groove.

78. (Currently Amended) The apparatus of claim ~~69~~72 wherein the insert defines a fourth raised detent between the first and second raised detents, the fourth raised detent being smaller than the first and second raised detents.

79. (Currently Amended) The apparatus of claim ~~69~~72 wherein the insert defines a fourth raised detent and a fifth raised detent, the fourth and fifth raised detents being between the first and second raised detents; and the fourth and fifth raised detents being smaller than the first and second raised detents.

80. (Currently Amended) The apparatus of claim 72~~69~~ including a fourth raised detent and a fifth raised detent; the fourth raised detent being between the first and second raised detents; the fifth raised detent being between the second and third raised detents; the first, second and third raised detents being substantially the same in size and configuration; and the fourth and fifth raised detents being smaller than the first, second and fifth raised detents.

81. (Currently Amended) The apparatus of claim ~~69~~72 including a fourth raised detent and a fifth raised detent; the fourth raised detent being between the first and second raised detents; the fifth raised detent being between the second and third raised detents; ~~and the third and fourth~~ the fourth and fifth raised detents being smaller than the first, second and third raised detents; and the fourth and fifth raised detents being substantially the same in size and configuration.

82. (Currently Amended) Apparatus comprising:
a conduit section defining a conduit section lumen;
a fitting;
a rigid insert defining a central lumen, a first raised detent, a second raised
detent axially spaced from the first raised detent and a third raised detent axially
spaced from the first and second raised detents, the rigid insert being affixed to the
fitting and extending into the conduit section lumen;
a first retainer positioned over the conduit section in substantial alignment
between the first and second raised detents;
a second retainer positioned over the conduit section in substantial alignment
between the second and third raised detents; and, ~~The apparatus of claim 69 including~~
a strap defining strap end portions, wherein the insert includes a staple; the strap
passes through the staple; and one of the strap end portions engages the one of the
first and second retainers.

83. (Canceled)